

REMARKS

Applicants submit this Amendment After Final in reply to the Final Office Action dated August 27, 2003.

In this Amendment After Final, Applicants have amended claims 23 and 28, and added new claims 33-36 to better define the claimed invention. Claims 23 and 28 are the sole independent claims.

Before entry of this Amendment After Final, claims 23-32 were pending in this application. After entry of this Amendment After Final, claims 23-36 are pending in this application.

The originally-filed specification, claims, abstract, and drawings fully support the subject matter of amended claims 23 and 28 and new claims 33-36. Specifically, support can be found at least in pages 12-18 of the originally-filed specification. No new matter was introduced.

In the Final Office Action, the Examiner rejected claims 23, 24, and 27 under 35 U.S.C. §103(a) as being unpatentable over Moriya et al. (U.S. Patent No. 5,494,522) ("Moriya") in view of Komino et al. (U.S. Patent No. 5,769,952) ("Komino"), rejected claims 23 and 26 under 35 U.S.C. §103(a) as being unpatentable over Moriya in view of Komino, and further in view of Horiuchi et al. (U.S. Patent No. 5,155,331) ("Horiuchi") and Dhindsa et al. (U.S. Patent No. 5,904,799) ("Dhindsa"), rejected claims 28, 29, 30, and 32 under 35 U.S.C. §103(a) as being unpatentable over Moriya in view of Horiuchi, and rejected claim 31 under 35 U.S.C. §103(a) as being unpatentable over Moriya in view of Horiuchi, and further in view of Dhindsa. Applicants respectfully traverse these rejections.

Applicants note that “the examiner bears the initial burden, on review of the prior art on any other ground, of presenting a *prima facie* case of unpatentability.” In re Oetiker, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992) (emphasis original). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art references, when combined, must teach or suggest every aspect of the claimed invention. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Finally, there must be a reasonable expectation of success. M.P.E.P. §2143.

Furthermore, the teaching or suggestion to make the claimed combination and a reasonable expectation of success must both be found in the prior art, not in Applicants’ disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Additionally, the evidence of teaching, suggestion, or motivation to combine must be “clear and particular.” In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). As will be described below, the combination of the cited references is improper, and thus the Examiner has failed to establish a proper *prima facie* case of obviousness under 35 U.S.C. §103(a).

Applicants respectfully disagree with the Examiner’s arguments and conclusions, and submit that a *prima facie* case of obviousness has not been established. No proper combination of the cited references, including Moriya, Komino, Horiuchi, Dhindsa, and the other art of record, teaches or suggests the present invention as claimed in independent claims 23 and 28, as amended.

For example, independent claims 23 and 28, as amended, each recite a plasma processing method including, among other aspects, "a step of introducing gas into said plasma processing chamber via said delivery chamber." None of the cited references disclose or suggest at least this aspect of the claimed invention.

Komino discloses transporting a treatment object from an atmospheric side transport opening 330 into a load lock chamber 303. A gate valve 331 closes the atmospheric side transport opening 330, and the load lock chamber 303 is placed under a vacuum. Another gate valve 304 is then opened and the treatment object is transferred from the load lock chamber 303 into a treatment chamber 302, both of which are under vacuum, via a transport opening 320. The gate valve 304 then closes and seals the transporting opening 320. The treatment object is then processed. After processing, the treatment object is transferred from the treatment chamber 302 to the load lock chamber 303, again under vacuum, and then the gate valve 304 between the load lock chamber 303 and treatment chamber 302 is closed. Only then is load lock chamber 303 put under a non-vacuum pressure. (Col. 13, line 51 through col. 14, line 19). Accordingly, Komino does not disclose or suggest the claimed method, including, inter alia, "a step of introducing gas into said plasma processing chamber via said delivery chamber" as recited in each of independent claims 23 and 28, as the load lock chamber 303 is under vacuum when the gate valve 304 has been opened, and hence cannot introduce gas into the treatment chamber 302.

Moriya discloses carrying a wafer W into an auxiliary vacuum chamber 302. A gate valve 306 of the auxiliary vacuum chamber 302 is then closed, and the auxiliary vacuum chamber 302 is exhausted into a vacuum through an exhaust pipe 319.

Another gate valve 304 is then opened and the wafer W is carried from the auxiliary vacuum chamber 302 into a vacuum process chamber 301, under vacuum. The gate valve 304 is then closed. The wafer W is then processed. After processing, the gate valve 304 is opened and the wafer W is carried into the auxiliary vacuum chamber 302, under vacuum. The gate valve 304 is then closed, and nitrogen gas is then supplied to the auxiliary vacuum chamber 302 through the gas nozzle 321. The gate valve 306 is then opened, and the wafer W is carried out of the auxiliary vacuum chamber 302 (Col. 11, line 54 through col. 12, line 24). Accordingly, Moriya does not disclose or suggest the claimed method, including, inter alia, "a step of introducing gas into said plasma processing chamber via said delivery chamber" as recited in each of independent claims 23 and 28, as the auxiliary vacuum chamber 302 is under vacuum when the gate valve 304 has been opened, and hence cannot introduce gas into the vacuum process chamber 301.

Furthermore, Applicants assert that neither Horiuchi nor Dhindsa remedy at least the aforementioned deficiency of Komino and Moriya. Indeed, the Examiner has not asserted otherwise in the Final Office Action. Accordingly, because the Examiner has not set forth how the cited references disclose or suggest every aspect of the claimed invention, the Examiner has not established a proper *prima facie* case of obviousness. Thus, Applicants respectfully request the allowance of each of independent claims 23 and 28 and their respective dependent claims.

Applicants further submit that claims 24-27 and 29-36 depend from one of independent claims 23 and 28, and are therefore allowable for at least the same reasons that each of those respective independent claims is allowable. In addition, at

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least some of the dependent claims recite unique combinations that are neither taught nor suggested by Moriya, Komino, Horiuchi, Dhindsa, or the cited art, and therefore at least some also are separately patentable.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 23-36 in condition for allowance. Applicants submit that the proposed amendments of claims 23 and 28 and new claims 33-36 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the Final Office Action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the Amendment After Final would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment After Final, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

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The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In discussing the specification, claims, abstract, and drawings in this Amendment After Final, it is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicants are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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